METHOD AND CIRCUITS FOR ENCODING AN INPUT PATTERN USING
A NORMALIZER AND A CLASSIFIER

ABSTRACT

Let us consider a plurality of input patterns having an

5   essential characteristic in common but which differ on at
least one parameter (this parameter modifies the input
pattern in some extent but not this essential
characteristic for a specific application). During the
learning phase, each input pattern is normalized in a

10   normalizer, before it is presented to a classifier. If not
recognized, it is learned, i.e. the normalized pattern is
stored in the classifier as a prototype with its category
associated thereto. From a predetermined reference value of
that parameter, the normalizer computes an element related

15   to said parameter which allows to set the normalized
pattern from the input pattern and vice versa to retrieve
the input pattern from the normalized pattern. As a result,
all these input patterns are represented by the same
normalized pattern. The above method and circuits allow to

20   reduce the number of required prototypes in the classifier,
improving thereby its response quality.

FIG. 7